

AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A biocompatible membrane, the biocompatible membrane comprising a silicone composition comprising a hydrophile incorporated therein, wherein the silicone composition is configured to ~~control transport~~ resist diffusion of an analyte through the biocompatible membrane, ~~with the proviso that the silicone composition is not produced from a precursor comprising diisocyanate.~~ and wherein the silicone composition comprises a silicone polymer comprising an alternating silicon and oxygen atom backbone, wherein terminal groups of the backbone are selected from optionally substituted alkyl, alkenyl, aryl or aralkyl.

2. (ORIGINAL) The biocompatible membrane of claim 1, wherein the silicone composition comprises a hydrophile grafted therein.

3. (ORIGINAL) The biocompatible membrane of claim 1, comprising two or more domains.

4. (ORIGINAL) The biocompatible membrane of claim 1, comprising a cell disruptive domain, wherein the cell disruptive domain supports tissue ingrowth and interferes with barrier-cell layer formation.

5. (ORIGINAL) The biocompatible membrane of claim 4, wherein the cell disruptive domain comprises the silicone composition.

6. (ORIGINAL) The biocompatible membrane of claim 5, wherein the silicone composition comprises from about 1 wt. % to about 20 wt. % of the hydrophile.

7. (ORIGINAL) The biocompatible membrane of claim 1, comprising a cell impermeable domain, wherein the cell impermeable domain is resistant to cellular attachment and is impermeable to cells and cell processes.

8. (ORIGINAL) The biocompatible membrane of claim 7, wherein the cell impermeable domain comprises the silicone composition.

9. (ORIGINAL) The biocompatible membrane of claim 8, wherein the silicone composition comprises from about 1 wt. % to about 20 wt. % of the hydrophile.

10. (ORIGINAL) The biocompatible membrane of claim 1, comprising a resistance domain, wherein the resistance domain controls a flux of oxygen and glucose through the membrane.